

IN THE CLAIMS:

Please amend claims 1, 5, 7-9, 11, 13, 15, 19, 21-23, 25, and 27 to read as follows, cancel claims 6 and 20, without prejudice, and add claims 29-66 as follows:

Sub B
A
Claim 1 (currently amended): A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising: inserting left side descendent nodes into the binary tree by successively finding ~~the~~ a median of each left side grouping and linking each found median to the previous median; inserting right side descendent nodes into the binary tree by successively finding ~~the~~ a median of each right side grouping and linking each found median to the previous median; and processing the left side groupings in preference to the right side groupings; wherein the elements of the lists include logged events.

Claim 2 (original): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 1.

Claim 3 (original): The method of claim 1, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 4 (original): The method of claim 1, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 5 (currently amended): The method of claim 1, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into a partially assembled version of the binary tree, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into the partially assembled version of the binary

In re Appln of BURROWS et al.
Appln. No. 09/764,011

tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 6 (canceled)

Claim 7 (currently amended): ~~The method of claim 1,~~ A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising: inserting left side descendent nodes into the binary tree by successively finding a median of each left side grouping and linking each found median to the previous median; inserting right side descendent nodes into the binary tree by successively finding a median of each right side grouping and linking each found median to the previous median; and processing the left side groupings in preference to the right side groupings; wherein the elements of the list include data representing the number of times one or more threads of execution have passed through one or more code modules.

Claim 8 (currently amended): ~~The method of claim 1,~~ A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising: inserting left side descendent nodes into the binary tree by successively finding a median of each left side grouping and linking each found median to the previous median; inserting right side descendent nodes into the binary tree by successively finding a median of each right side grouping and linking each found median to the previous median; and processing the left side groupings in preference to the right side groupings; wherein the inserted right and left descendant nodes include data representing the number of times one or more threads of execution have passed through one or more code modules.

Claim 9 (currently amended): ~~The method of claim 1,~~ A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method

comprising: inserting left side descendent nodes into the binary tree by successively finding a median of each left side grouping and linking each found median to the previous median; inserting right side descendent nodes into the binary tree by successively finding a median of each right side grouping and linking each found median to the previous median; and processing the left side groupings in preference to the right side groupings; wherein the inserted right and left descendant nodes include one or more pointers to data representing the number of times one or more threads of execution have passed through one or more code modules.

Claim 10 (original): The method of claim 1, wherein the list is an ordered linked list.

7 Claim 11 (Currently Amended): A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

(a) successively subdividing the left side groupings of the list and linking each successive median element with ~~the~~ a previous median element, thereby creating left side descendent nodes in the binary tree;

(b) once each left side grouping has been exhausted as a result of step (a), stepping back up the tree through each successive ancestor node until reaching an element having right side groupings in the list, and, upon reaching an element having a right side grouping in the list, proceeding to step (c);

(c) subdividing the right side groupings and linking ~~the~~ a median element of the right side grouping with the element reached in step (b), thereby creating a right side descendent of the tree;

(d) if the right side descendent of step (c) has a left side grouping in the list, repeating step (a) for the left side grouping; and

(e) if the right side descendent of step (c) has no left side groupings, but has a right side grouping, repeating step (c) for the right side grouping;

wherein the elements of the list include logged events.

Claim 12 (original): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 11.

Claim 13 (currently amended): A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

- (a) determining if there are elements to the left of ~~a~~the parent element;
 - (b) if there are no elements to the left of the parent element, proceeding to step (f);
 - (c) for the elements that are to the left of the parent element, finding a median element;
 - (d) linking the median element of step (c) to the parent element so that the median element is ~~the~~a child of the parent element;
 - (e) repeating steps (b) and (c), wherein the child element of step (d) is now treated as the parent element in steps (b) and (c);
 - (f) locating ~~the~~a next element up on the tree that has elements to the right of it and treating the element as a parent element in step (g);
 - (g) finding ~~the~~a median element of the elements to the right of the parent element from step (f);
 - (h) linking the median element of step (g) to the parent element of step ~~(g)~~(f), wherein the median element is ~~the~~a child of the parent; and
 - (i) repeating steps (b) through (e), wherein the child element of step (h) is treated as the parent element in step (b);
- wherein the elements of the list include logged events.

Claim 14 (original): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 13.

Claim 15 (currently amended): A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising: inserting right side descendent nodes into the binary tree by successively finding ~~the~~a median of

In re Appln of BURROWS et al.
Appln. No. 09/764,011

each right side grouping and linking each found median to the previous median; inserting left side descendent nodes into the binary tree by successively finding the median of each left side grouping and linking each found median to the previous median; and processing the right side groupings in preference to the left side groupings; wherein the elements of the list include logged events.

Claim 16 (original): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 15.

Claim 17 (original): The method of claim 15, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.


Claim 18 (original): The method of claim 15, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 19 (currently amended): The method of claim 15, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into a partially assembled version of the binary tree, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 20 (canceled)

Claim 21 (currently amended): ~~The method of claim 15,~~ A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings

separated by a common parent element defined as a median of the list of elements, the method comprising: inserting right side descendent nodes into the binary tree by successively finding a median of each right side grouping and linking each found median to the previous median; inserting left side descendent nodes into the binary tree by successively finding a median of each left side grouping and linking each found median to the previous median; and processing the right side groupings in preference to the left side groupings; wherein the elements of the list include data representing the number of times one or more threads of execution have passed through one or more code modules.

 Claim 22 (currently amended): ~~The method of claim 15,~~ A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising: inserting right side descendent nodes into the binary tree by successively finding a median of each right side grouping and linking each found median to the previous median; inserting left side descendent nodes into the binary tree by successively finding a median of each left side grouping and linking each found median to the previous median; and processing the right side groupings in preference to the left side groupings; wherein the inserted right and left descendant nodes include data representing the number of times one or more threads of execution have passed through one or more code modules.

Claim 23 (currently amended): ~~The method of claim 15,~~ A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising: inserting right side descendent nodes into the binary tree by successively finding a median of each right side grouping and linking each found median to the previous median; inserting left side descendent nodes into the binary tree by successively finding a median of each left side grouping and linking each found median to the previous median; and processing the right side groupings in preference to the left side groupings; wherein the inserted right and left descendant nodes include one or more pointers to data representing number of times one or more threads of execution have passed through one or more code modules.

Claim 24 (original): The method of claim 15, wherein the list is an ordered linked list.

Claim 25 (currently amended): A method for creating a binary tree from a list of elements, wherein the list includes right side groupings and left side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

(a) successively subdividing the right side groupings of the list and linking each successive median element with ~~the~~ previous median element, thereby creating right side descendent nodes in the binary tree;

(b) once each right side grouping has been exhausted as a result of step (a), stepping back up the tree through each successive ancestor node until reaching an element having left side groupings in the list, and, upon reaching an element having a left side grouping in the list, proceeding to step (c);

(c) subdividing the left side groupings and linking ~~the~~ median element of the left side grouping with the element reached in step (b), thereby creating a left side descendent of the tree;

(d) if the left side descendent of step (c) has a right side grouping in the list, repeating step (a) for the right side grouping; and

(e) if the left side descendent of step (c) has no right side groupings, but has a left side grouping, repeating step (c) for the left side grouping;

wherein the elements of the list include logged events.

Claim 26 (original): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 25.

Claim 27 (currently amended): A method for creating a binary tree from a list of elements, wherein the list includes right side groupings and left side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

(a) determining if there are elements to the right of ~~a~~ the parent element;

(b) if there are no elements to the right of the parent element, proceeding to step (f);

(c) for the elements that are to the right of the parent element, finding a median element;

(d) linking the median element of step (c) to the parent element so that the median element is ~~the~~ a child of the parent element;

(e) repeating steps (b) and (c), wherein the child element of step (d) is now treated as the parent element in steps (b) and (c);

(f) locating ~~the~~ a next element up on the tree that has elements to the left of it and treating the element as a parent element in step (g);

(g) finding ~~the~~ a median element of the elements to the left of the parent element from step (f);

(h) linking the median element of step (g) to the parent element of step ~~(g)~~(f), wherein the median element is ~~the~~ a child of the parent; and

(i) repeating steps (b) through (e), wherein the child element of step (h) is treated as the parent element in step (b);

wherein the elements of the list include logged events.

Claim 28 (original): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 27.

Claim 29 (new): The method of claim 7, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 30 (new): The method of claim 7, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 31 (new): The method of claim 7, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into a partially assembled version of the binary tree, wherein inserting the right side descendent nodes comprises inserting the right side

In re Appln of BURROWS et al.
Appln. No. 09/764,011

descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 32 (new): The method of claim 7, wherein the list is an ordered linked list.

Claim 33 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 7.

Claim 34 (new): The method of claim 8, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 35 (new): The method of claim 8, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 36 (new): The method of claim 8, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into a partially assembled version of the binary tree, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 37 (new): The method of claim 8, wherein the list is an ordered linked list.

Claim 38 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 8.

Claim 39 (new): The method of claim 9, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 40 (new): The method of claim 9, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 41 (new): The method of claim 9, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into a partially assembled version of the binary tree, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 42 (new): The method of claim 9, wherein the list is an ordered linked list.

Claim 43 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 9.

Claim 44 (new): A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

(a) successively subdividing the left side groupings of the list and linking each successive median element with a previous median element, thereby creating left side descendent nodes in the binary tree;

(b) once each left side grouping has been exhausted as a result of step (a), stepping back up the tree through each successive ancestor node until reaching an element having right side

groupings in the list, and, upon reaching an element having a right side grouping in the list, proceeding to step (c);

(c) subdividing the right side groupings and linking a median element of the right side grouping with the element reached in step (b), thereby creating a right side descendent of the tree;

(d) if the right side descendent of step (c) has a left side grouping in the list, repeating step (a) for the left side grouping; and

(e) if the right side descendent of step (c) has no left side groupings, but has a right side grouping, repeating step (c) for the right side grouping;

wherein the elements of the list include data representing number of times one or more threads of execution have passed through one or more code modules.

Claim 45 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 44.

Claim 46 (new): A method for creating a binary tree from a list of elements, wherein the list includes left side groupings and right side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

(a) determining if there are elements to the left of the parent element;

(b) if there are no elements to the left of the parent element, proceeding to step (f);

(c) for the elements that are to the left of the parent element, finding a median element;

(d) linking the median element of step (c) to the parent element so that the median element is a child of the parent element;

(e) repeating steps (b) and (c), wherein the child element of step (d) is now treated as the parent element in steps (b) and (c);

(f) locating a next element up on the tree that has elements to the right of it and treating the element as a parent element in step (g);

(g) finding a median element of the elements to the right of the parent element from step (f);

(h) linking the median element of step (g) to the parent element of step (f), wherein the median element is a child of the parent; and

(i) repeating steps (b) through (e), wherein the child element of step (h) is treated as the parent element in step (b);

wherein the elements of the list include data representing number of times one or more threads of execution have passed through one or more code modules.

Claim 47 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 46.

Claim 48 (new): The method of claim 21, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 49 (new): The method of claim 21, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 50 (new): The method of claim 21, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into a partially assembled version of the binary tree, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 51 (new): The method of claim 21, wherein the list is an ordered linked list.

Claim 52 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 21.

Claim 53 (new): The method of claim 22, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 54 (new): The method of claim 22, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 55 (new): The method of claim 22, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into a partially assembled version of the binary tree, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 56 (new): The method of claim 22, wherein the list is an ordered linked list.

Claim 57 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 22.

Claim 58 (new): The method of claim 23, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree, wherein each node has a right child pointer, and wherein inserting the right side nodes further comprises assigning a value to the right side pointer of at least one of the nodes.

Claim 59 (new): The method of claim 23, wherein each element in the list includes a pointer to a corresponding node of a plurality of nodes in a partially assembled binary tree,

wherein each node has a left child pointer, and wherein inserting the left side nodes further comprises assigning a value to the left side pointer of at least one of the nodes.

Claim 60 (new): The method of claim 23, wherein inserting the right side descendent nodes comprises inserting the right side descendent nodes into a partially assembled version of the binary tree, wherein inserting the left side descendent nodes comprises inserting the left side descendent nodes into the partially assembled version of the binary tree, and wherein the list is a linked list that acts as a wrapper around the partially assembled version of the binary tree.

Claim 61 (new): The method of claim 23, wherein the list is an ordered linked list.

Claim 62 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 23.

Claim 63 (new): A method for creating a binary tree from a list of elements, wherein the list includes right side groupings and left side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

(a) successively subdividing the right side groupings of the list and linking each successive median element with a previous median element, thereby creating right side descendent nodes in the binary tree;

(b) once each right side grouping has been exhausted as a result of step (a), stepping back up the tree through each successive ancestor node until reaching an element having left side groupings in the list, and, upon reaching an element having a left side grouping in the list, proceeding to step (c);

(c) subdividing the left side groupings and linking a median element of the left side grouping with the element reached in step (b), thereby creating a left side descendent of the tree;

(d) if the left side descendent of step (c) has a right side grouping in the list, repeating step (a) for the right side grouping; and

(e) if the left side descendent of step (c) has no right side groupings, but has a left side grouping, repeating step (c) for the left side grouping;

wherein the elements of the list include data representing number of times one or more threads of execution have passed through one or more code modules.

Claim 64 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 63.

Claim 65 (new): A method for creating a binary tree from a list of elements, wherein the list includes right side groupings and left side groupings separated by a common parent element defined as a median of the list of elements, the method comprising:

- (a) determining if there are elements to the right of the parent element;
- (b) if there are no elements to the right of the parent element, proceeding to step (f);
- (c) for the elements that are to the right of the parent element, finding a median element;
- (d) linking the median element of step (c) to the parent element so that the median element is a child of the parent element;
- (e) repeating steps (b) and (c), wherein the child element of step (d) is now treated as the parent element in steps (b) and (c);
- (f) locating a next element up on the tree that has elements to the left of it and treating the element as a parent element in step (g);
- (g) finding a median element of the elements to the left of the parent element from step (f);
- (h) linking the median element of step (g) to the parent element of step (f), wherein the median element is a child of the parent; and
- (i) repeating steps (b) through (e), wherein the child element of step (h) is treated as the parent element in step (b);

wherein the elements of the list include data representing number of times one or more threads of execution have passed through one or more code modules.

Claim 66 (new): A computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 65.